

generating the subscriber profile by applying the heuristic rules to the interaction traits.

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99. The method of claim 98, wherein said processing includes retrieving content characteristics associated with content included in the subscriber interactions; and

processing the subscriber interactions and the associated content characteristics to generate interaction characteristics.

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100. The method of claim 98, wherein the heuristic rules associate specific subscriber interactions with specific demographic characteristics.

101. The method of claim 98, wherein the heuristic rules associate specific subscriber interactions with probabilities that the subscriber has various demographic characteristics. --

Remarks

The Examiner noted that he did not receive any of the non-US documents referred to in the IDS submitted on August 3, 2001 and accordingly did not consider the references. Applicant submits an additional IDS including the non-received references, several other references recently cited against Applicant in Applicant's closely related US Application 09/205,119, and several of Applicants currently pending applications and issued patents.

The Examiner rejected claims 20, 22-29, 32-36, 39-61 and 63-77 under 35 U.S.C. §102(b) as being anticipated by *Alexander et al.* (U.S.P. 6,177,931); claim 21 under 35 U.S.C. §103(a) as being unpatentable over *Williams et al.*; claim 30 under 35 U.S.C. §103(a) as being unpatentable over *Williams et al.* in view of *Maa* (U.S.P. 5,818,935); claims 31 and 62 under 35 U.S.C. §103(a) as being unpatentable over *Williams et al.* in view of *Hidary* (U.S.P. 5,774,664);

and claims 37 and 38 as being unpatentable over *Williams et al.* in view of *Herz et al.* (U.S.P. 6,088,722). Claims 20-77 have been canceled without prejudice or disclaimer to the subject matter contained therein. New claims 78-101 have been added. It is submitted that claims 78-101 are patentable over the cited references for at least the following reasons.

Independent claim 78 is directed to a method for generating a subscriber profile for a subscriber of television services. The method includes monitoring subscriber television viewing interactions. Content characteristics associated with content included in the subscriber television viewing interactions are retrieved. The subscriber television viewing interactions and the content characteristics are processed to generate subscriber television viewing habits. Heuristic rules associated with at least some subset of the subscriber television viewing habits are retrieved. The heuristic rules associate the subscriber television viewing habits with non-television viewing characteristics about the subscriber. The heuristic rules are applied to the at least some subset of the subscriber television viewing habits to generate the subscriber profile. It is submitted that none of the cited references, whether taken alone or in combination with one another, disclose or suggest application of heuristic rules that associate subscriber television viewing habits with non-television viewing characteristics about the subscriber to generate a subscriber profile, as required by claim 78.

To the contrary, *Alexander et al.* is directed to an interactive electronic program guide (EPG) system that monitors a viewers interactions with an EPG and/or a TV and analyzes the data in order to determine the type of programs that the viewer may wish to watch and/or record so that the EPG can be customized accordingly. The data collected about the viewer (viewer profile information) is analyzed by a simple statistical analysis to determine, for example, the number of times: the viewer interacted with the EPG is activated during a viewing session; performed particular types of interactions with the EPG; watched a particular channel; and watched, recorded, or scheduled a program with a particular theme, subject or having a particular actor (see col. 29, lines 14-55). Based on the collected and analyzed data the system can determine viewer preferences, such as, determining that a viewer likes a particular basketball team based on the fact that they watch that team often (see col. 29. lines 56-67). Further analysis

can be performed to determine viewer characteristics by comparing, for example, various interactions of the viewer during programs identified within the viewer preferences to programs not identified in the viewer preferences. The viewer characteristics may include, for example, attention span, general interest in product advertisements, interest in future programs, and correlation of impulse buying to price ranges (see col. 30, lines 1-29). All of the preferences and/or characteristics that are gathered and analyzed are related to the viewer interactions. There is clearly no disclosure or suggestion of relating television viewing habits to non-television viewing characteristics, let alone relating the television viewing habits to non-television viewing characteristics through the use of heuristic rules, as required by claim 78.

On page 4 of the Office Action with respect to claim 36 and page 9 with respect to claim 66, the Examiner contends that *Alexander et al.* disclose a set of heuristic rules at col. 29, line 56 – col. 30, line 6. Initially, the Applicant points out that there is no disclosure of rules being applied in order to generate the viewer preferences described in this passage of *Alexander et al.* However, even assuming arguendo, that *Alexander et al.* did disclose (or suggest) a set of heuristic rules to generate the viewer preferences, the viewer preferences are simply an extrapolation of interaction data, and as such are not related to non-television viewing characteristics, as required by independent claim 78. Moreover, the Examiner does not rely on any of the other references for the disclosure of the elements of claim 78 delinquent from *Alexander et al.* and the applicant submits that none of the other references disclose or suggest these elements.

For at least the reasons described above, claim 78 is submitted to be patentable over the cited references, whether taken alone or in combination with one another. Claims 79-90 depend from claim 78 and are therefore submitted to be patentable over the cited references for at least the reasons described above with respect to claim 78 and for the further features recited therein.

For example, dependent claim 87 recites that the non-television viewing characteristics include at least some subset of age, gender, income level and family size. The applicant submits that there is no disclosure of these types of non-television viewing characteristics in *Alexander et al.* On page 4 of the Office Action with respect to claim 41; page 6 with respect to claims 46, 58 and 69; and page 10 with respect to claim 71, the Examiner contends that *Alexander et al.* disclose a demographic profile including age, gender, income level and family size attributes at

col. 30, line 29-32. Initially, the Applicant points out that *Alexander et al.* actually do not disclose any of these attributes. Furthermore, even assuming arguendo that the *Alexander et al.* disclosed the demographic attributes recited in claim 87, there is clearly no disclosure (or suggestion) that the attributes were generated by applying heuristic rules to the subscriber television viewing habits, as required by claim 87. Moreover, it is submitted that none of the other references disclose or suggest the features of claim 87, delinquent from the teachings of *Alexander et al.* Claim 87 is submitted to be patentable over the cited references for this additional reason.

Dependent claim 90 recites the subscriber television viewing habits to non-television viewing characteristics associations defined in the heuristic rules include at least some subset of program to gender, channel change speed to gender, channel change speed to income level, program genre to age, program genre to gender, program genre to income level, and program genre to family size. There is clearly no disclosure (or suggestion) in any of the cited references of heuristic rules having subscriber television viewing habits to non-subscriber television viewing characteristic associations, as required by claim 90. Claim 90 is submitted to be patentable over the cited references for this additional reason.

Independent claim 91 is directed to a method for generating a subscriber profile for a subscriber of television services. The method includes monitoring subscriber interactions with a television. Heuristic rules associated with at least some subset of the subscriber interactions are retrieved. The heuristic rules predict demographic characteristics about the subscriber including at least some subset of gender, income level and family size. The heuristic rules are applied to the at least some subset of the subscriber interactions to generate the subscriber profile. It is submitted that none of the cited references, whether taken alone or in combination with one another, disclose or suggest application of heuristic rules that predict demographic characteristics (i.e., gender, income level, family size) about the subscriber based on subscriber interactions to generate a subscriber profile, as required by claim 91. It is submitted that claim 91 is patentable over the cited references for at least reasons similar to those presented above with respect to claims 78 and 87.

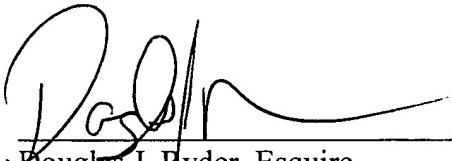
Independent claim 98 is directed to a method for generating a subscriber profile. The method includes monitoring subscriber interactions with a television. The subscriber interactions are processed to generate interaction traits. Heuristic rules associated with the interaction traits are retrieved. The heuristic rules associate the interaction traits to demographic traits. The interaction traits to demographic traits associations including at least some subset of program to genre, channel change speed to gender, channel change speed to income level, program genre to age, program genre to gender, program genre to income level, and program genre to family size. The subscriber profile is generated by applying the heuristic rules to the interaction traits. It is submitted that none of the cited references, whether taken alone or in combination with one another, disclose or suggest application of heuristic rules that associate interaction traits with demographic traits (i.e., program to genre; channel change speed to gender and income level; program genre to age, gender, income level and family size) to generate a subscriber profile, as required by claim 98. It is submitted that claim 98 is patentable over the cited references for at least reasons similar to those presented above with respect to claims 78 and 90.

Conclusion

For the foregoing reasons, Applicant respectfully submits that claims 78-101 are in condition for allowance. Accordingly, early allowance of claims 78-101 is earnestly solicited.

If the Examiner believes that a conference would be of value in expediting the prosecution of this Application, the Examiner is hereby invited to contact the undersigned attorney to set up such a conference.

Respectfully submitted,



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78. A method for generating a subscriber profile for a subscriber of television services, the method comprising:
- monitoring subscriber television viewing interactions;
- retrieving content characteristics associated with content included in the subscriber
- 5 television viewing interactions;
- processing the subscriber television viewing interactions and the content characteristics to generate subscriber television viewing habits;
- retrieving heuristic rules associated with at least some subset of the subscriber television
- viewing habits, wherein the heuristic rules associate the subscriber television viewing habits with
- 10 non-television viewing characteristics about the subscriber; and
- applying the heuristic rules to the at least some subset of the subscriber television
- viewing habits to generate the subscriber profile.
79. The method of claim 78, wherein the content includes programming and
- 15 advertisements.
80. The method of claim 78, wherein said retrieving content characteristics includes
- retrieving the content characteristics from an EPG.
- 20 81. The method of claim 80, wherein the content characteristics include at least some
- subset of program category, program sub-category, and rating.
82. The method of claim 78, wherein said retrieving content characteristics includes

retrieving text associated with the content; and
data mining the text for data associated with characteristics of the content.

83. The method of claim 82, wherein said retrieving further includes comparing the
5 associated data with content characteristic groupings to determine the content characteristics of
the particular content

84. The method of claim 82, wherein the associated text includes at least some subset
of closed captioning data, EPG data, and HTML files.

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85. The method of claim 78, wherein said monitoring includes monitoring at least
some subset of volume commands, channel changes, program selections, address requests,
record commands, print commands, bookmarks, EPG activation, and time.

15 86. The method of claim 78, wherein the non-television viewing characteristics
include at least some subset of product interests and demographics.

87. The method of claim 78, wherein the non-television viewing characteristics
include at least some subset of age, gender, income level and family size.

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88. The method of claim 78, wherein the heuristic rules associate specific subscriber
television viewing habits with specific non-television viewing characteristics.

89. The method of claim 78, wherein the heuristic rules associate specific subscriber television viewing habits with probabilities that the subscriber has various non-television viewing characteristics.

5 90. The method of claim 78, wherein the heuristic rules associate subscriber television viewing habits to non-television viewing characteristics including at least some subset of program to gender, channel change speed to gender, channel change speed to income level, program genre to age, program genre to gender, program genre to income level, and program genre to family size.

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91. A method for generating a subscriber profile for a subscriber of television services, the method comprising:

monitoring subscriber interactions with a television;
retrieving heuristic rules associated with at least some subset of the subscriber
15 interactions, wherein the heuristic rules predict demographic characteristics about the subscriber including at least some subset of gender, income level and family size; and
applying the heuristic rules to the at least some subset of the subscriber interactions to generate the subscriber profile.

20 92. The method of claim 91, wherein
said monitoring includes processing the subscriber interactions to generate interaction
characteristics;

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said retrieving includes retrieving heuristic rules associated with at least some subset of the interaction characteristics; and

10 said applying includes applying the heuristic rules to some combination of the interaction characteristics and the subscriber interactions to generate the subscriber profile.

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93. The method of claim 91, wherein

15 said monitoring includes retrieving content characteristics associated with content included in the subscriber interactions;

20 said retrieving includes retrieving heuristic rules associated with at least some subset of the content characteristics; and

said applying includes applying the heuristic rules to some combination of the interaction characteristics and the content characteristics to generate the subscriber profile.

94. The method of claim 91, wherein

15 said monitoring includes retrieving content characteristics associated with content included in the subscriber interactions and processing the subscriber interactions and the associated content characteristics to generate interaction characteristics;

20 said retrieving includes retrieving heuristic rules associated with at least some subset of the content characteristics; and

25 said applying includes applying the heuristic rules to the interaction characteristics to generate the subscriber profile.

95. The method of claim 91, wherein the heuristic rules associate subscriber interactions to non-interaction traits including at least some subset of program to gender, channel change speed to gender, channel change speed to income level, program genre to age, program genre to gender, program genre to income level, and program genre to family size.

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96. The method of claim 91, wherein the heuristic rules associate specific subscriber interactions with specific demographic characteristics.

97. The method of claim 91, wherein the heuristic rules associate specific subscriber interactions with probabilities that the subscriber has various demographic characteristics.

98. A method for generating a subscriber profile, the method comprising:
monitoring subscriber interactions with a television;
processing the subscriber interactions to generate interaction traits;
retrieving heuristic rules associated with the interaction traits, wherein the heuristic rules
associate the interaction traits to demographic traits, the interaction traits to demographic traits
associations including at least some subset of program to genre, channel change speed to gender,
channel change speed to income level, program genre to age, program genre to gender, program
genre to income level, and program genre to family size; and
generating the subscriber profile by applying the heuristic rules to the interaction traits.

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99. The method of claim 98, wherein said processing includes

retrieving content characteristics associated with content included in the subscriber interactions; and

processing the subscriber interactions and the associated content characteristics to generate interaction characteristics.

5

100. The method of claim 98, wherein the heuristic rules associate specific subscriber interactions with specific demographic characteristics.

101. The method of claim 98, wherein the heuristic rules associate specific subscriber interactions with probabilities that the subscriber has various demographic characteristics.